

Use of Data from Seismic Measurements in the Kylylahti Region, Finland, in 2016 for Further Development of Geophysical Seismic Techniques for CTBT On-Site Inspections

The Integrated Field Exercise of 2014 (IFE14) was a field event held in the Hashemite Kingdom of Jordan (with concurrent activities in Austria) that tested the operational and technical capabilities of an On-Site Inspection (OSI) according to the Comprehensive Test Ban Treaty (CTBT). The IFE14 tested in integrated manner already developed OSI techniques, including geophysical seismic techniques. However, one of permitted techniques not yet developed is resonance seismometry. During August and September 2016, field measurements have been conducted in the Kylylahti region in Finland. 45 seismic stations were used to acquire continuously seismic signals in parallel to active seismic surveys conducted at the site. During that time, in addition to the man-made seismic events associated with the surveys, local, regional and teleseismic natural events were acquired, including a damaging earthquake in Italy and a nuclear test explosion conducted by the DPRK on 9 September 2016. This presentation will show examples from the data set and will also discuss the use of the data set for the development of resonance seismometry capabilities for OSIs.

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